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Calculate Length Of Wire In Feet For 2% Maximum Voltage Drop In A 12 Volt System

Current Draw in Amps

Wire GA	1	2	3	4	5	7.5	10	15	20	25	30	40	50	60	70	80	90	100	150	200	250
22	14.4	7.2	4.8	3.6	2.9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20	23.0	11.5	7.5	5.5	4.5	3.0	2.0	X	X	X	X	X	X	X	X	X	X	X	X	X	X
18	36.5	18.3	12.2	9.1	7.3	4.9	3.7	2.4	X	X	X	X	X	X	X	X	X	X	X	X	X
16	57.5	28.8	19.2	14.4	11.5	7.7	5.8	3.8	2.9	X	X	X	X	X	X	X	X	X	X	X	X
14	92.0	46.0	30.7	23.0	18.4	12.3	9.2	6.1	4.6	3.7	3.1	X	X	X	X	X	X	X	X	X	X
12	X	73.5	49.0	36.8	29.4	19.6	14.7	9.8	7.4	5.9	4.9	3.7	X	X	X	X	X	X	X	X	X
10	X	X	78.0	58.5	46.8	31.2	23.4	15.6	11.7	9.4	7.8	5.9	4.7	X	X	X	X	X	X	X	X
8	X	X	X	93.0	74.4	49.6	37.2	24.8	18.6	14.9	12.4	9.3	7.4	6.2	5.3	X	X	X	X	X	X
6	X	X	X	X	X	78.7	59.0	39.3	29.5	23.6	19.7	14.8	11.8	9.8	8.4	7.4	6.6	5.9	X	X	X
4	X	X	X	X	X	X	94.0	62.7	47.0	37.6	31.3	23.5	18.8	15.7	13.4	11.8	10.4	9.4	X	X	X
2	X	X	X	X	X	X	X	99.5	74.6	59.7	49.7	37.3	29.8	24.9	21.3	18.7	16.6	14.9	9.9	X	X
1	X	X	X	X	X	X	X	X	94.3	57.4	62.8	47.1	37.7	31.4	26.9	23.6	20.9	18.9	12.6	9.4	X
1/0	X	X	X	X	X	X	X	X	X	95.2	79.3	59.5	47.6	39.7	34.0	29.8	26.4	23.8	15.9	11.9	X
2/0	X	X	X	X	X	X	X	X	X	X	100.0	75.0	60.0	50.0	42.9	37.5	33.3	30.0	20.0	15.0	12.0
3/0	X	X	X	X	X	X	X	X	X	X	X	94.5	75.6	63.0	54.0	47.3	42.0	37.8	25.2	18.9	15.1
4/0	X	X	X	X	X	X	X	X	X	X	X	X	95.2	79.3	68.0	59.5	52.9	47.6	31.7	23.8	19.0

To use this chart, select the maximum current across the top row inder ***Current Draw in Amps***. Follow down that column to the length of the wire run. The minimum gage of the wire to be used is indicated in the left column under ***Wire GA***.

Disclaimer: Many factors can affect the performance of the application, such as voltage, temperature, load, etc. With so many variables, this chart is provided as a general guideline only.